

Cosmology Seminar

Dr. Chris Packham - University of Florida

Title: Mid-IR Instrumentation and Observations of AGN

Abstract: Mid-IR astronomy is undergoing a renaissance period driven by state of the art instruments and the advent of 10m class telescopes. The GTC, combined with the versatile capabilities of the mid-IR CanariCam instrument, will be superbly placed to continue this exciting period of research. In the first part of this talk, I present an overview of CanariCam, highlighting special design features and capabilities. I then briefly discuss the design and science case for a mid-IR polarimeter, under design for the 2.5m SOFIA airborne observatory, which will advance mid-IR observations to $\sim 40\frac{1}{4}$ m. In the second part, I discuss high spatial resolution mid-IR imaging observations from existing ground telescopes of AGN at hitherto unprecedented spatial detail. Follow-up spectroscopy reveals striking changes in AGN spectral features at sub-arcsecond scales. Such results place tight constraints on models of the torus and dust associated with the torus. Finally, I show new mid-IR imaging polarimetry of the archetypal AGN, NGC1068, and discuss the combined impact of such observations on models of the central regions of AGN. These results, obtained from the Gemini 8m telescopes highlight the opportunities for ground based, high spatial resolution mid-IR observations.

Tuesday December 4, 2007
11:00 - 12:00 PM - Room 525 PHY/GEO